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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Takayuki Numa

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EXAMINER

VO, HUYEN X

ART UNIT

PAPER NUMBER

2655

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/994,795	Applicant(s) NUMA, TAKAYUKI	
	Examiner Huyen Vo	Art Unit 2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
- 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
- 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
- 4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Paper No(s)/Mail Date 2/4/04 + 4/10/02 + 7/15/03

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oh et al. (US Patent No. 6185537) in view of Fukuda (US Patent No. 6456721).

3. Regarding claim 1, Oh et al. disclose a method for inputting an instruction to operate a computer, using a microphone for picking up a sound produced in an oral cavity of a user, comprising the steps of:

a) retrievably storing a plurality of registered sounds in a memory, each of the registered sounds corresponding to a different instruction (*Speech Models 19 and 21 in figure 1*);

b) inputting an input sound through the microphone (*Mic 14 in figure 1*);

c) searching the memory for an instruction using the input sound as a key (*Speech Recognition 18 in figure 1*); and

d) determining the instruction to operate the computer (*col. 2, ln. 49 to col. 3, ln. 33, determine what is being ask and issue instruction to perform tasks*).

Oh et al. fail to disclose that the microphone is a bone conduction microphone. However, Fukuda teaches that the microphone is a bone conduction microphone (*figures 1-6*).

Since Oh et al. and Fukuda are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Oh et al. by incorporating the teaching of Fukuda in order to enable users to wear the headset to transmit and receive two-way speech communication.

4. Regarding claim 7, Oh et al. disclose a system for determining an instruction to operate a computer, comprising: a microphone for picking up a sound produced in an oral cavity of a user (*col. 2, ln. 28-35*), a database for retrievably storing a plurality of registered sounds, each of the registered sounds corresponding to a different instruction (*elements 19-21 in figure 1*); processor controlling such that, when inputting an input sound through the microphone, the database is searched for an instruction corresponding to the input sound and, when the instruction is found, an operation corresponding to the instruction is performed (*col. 3, ln. 1-18*).

Oh et al. fail to disclose that the microphone is a bone conduction microphone mounted on a head of a user. However, Fukuda teaches that the microphone is a bone conduction microphone mounted on a head of a user (*figures 1-6*).

Since Oh et al. and Fukuda are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Oh et al. by incorporating the teaching of Fukuda in order to enable users to wear the headset to transmit and receive two-way speech communication.

5. Regarding claim 2, Oh et al. further disclose that the method according to claim 1, wherein each of the registered sounds stored in the memory is determined by at least one predetermined unit sound which is allowed to be produced in the oral cavity of the user (*speech models 19 and 21 in figure 1*).

6. Regarding claim 3, Oh et al. further disclose the method according to claim 2, wherein each of the registered sounds stored in the memory is determined by a combination of said at least one predetermined unit sound produced for a predetermined time period after a first unit sound has been produced (*col. 3, ln. 1-33, examples "take memo", "memo terminate", and "call home" these are two-word commands must include a silence period in between each two-word command*).

7. Regarding claim 4, Oh et al. further disclose that the method according to claim 2, wherein each of the registered sounds is produced by one of teeth-clicking and tongue-moving (*Recorded sounds models 19 and 21 are produced by teeth-clicking and tongue-moving by the speaker*).

8. Regarding claim 5, Oh et al. further disclose the method according to claim 1, wherein the step d) comprises the steps of: d.1) checking for the instruction through a bone conduction speaker (*step 76 in figure 3*); and d. 2) when receiving no negative response through the bone conduction microphone, finally determining the instruction to operate the computer (*step 76 in figure 3*).

9. Regarding claims 6 and 9, Oh et al. further disclose a method and system according to claims 1 and 7, respectively, wherein the computer has a calling function of making a call, wherein the instruction to the computer is to make a call to a predetermined destination (*col. 3, ln. 1-33*).

10. Regarding claim 10, Oh et al further disclose a system according to claim 7, further comprising: a memory storing a plurality of programs, wherein the processor selects one of the programs depending on the instruction and executes the selected program (*Speech Recognition, Speech Synthesis, Speech Compression programs stored in memory of system in figure 1 are controlled by the processor/controller of figure 1 to perform appropriate actions*).

11. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oh et al. (US Patent No. 6185537) in view of Fukuda (US Patent No. 6456721), as applied to claim 7 above, and further in view of Dahan et al. (US Patent No. 6018708).

12. Regarding claim 8, the modified Oh et al. fail to disclose that the system according to claim 7, further comprising: a bone conduction speaker for producing bone conduction vibrations, wherein the bone conduction speaker is mounted on the head of the user (*Figures 1-6 in Fukuda reference*). The modified Oh et al. fail to specifically disclose that the processor outputs a check signal to the bone conduction speaker to check with the user for the instruction and, when receiving no negative response through the bone conduction microphone, the instruction is finally determined.

However, Dahan et al. teach that the processor outputs a check signal to the bone conduction speaker to check with the user for the instruction and, when receiving no negative response through the bone conduction microphone, the instruction is finally determined (*col. 2, ln. 60 to col. 3, ln. 26*).

Since the modified Oh et al. and Dahan et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to further modify Oh et al. by incorporating the teaching of Dahan et al. in order to allow the user to specify the telephone numbers of whom he/she wishes to call.

13. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oh et al. (US Patent No. 6185537) in view of Fukuda (US Patent No. 6456721), as applied to claim 10 above, and further in view of Tognazzini (US Patent No. 5790974).

14. Regarding claim 11, the modified Oh et al. do not disclose a system according to claim 10, further comprising: a communication section for making a call, wherein the programs includes a telephone-calling program including a predetermined message, wherein the telephone-calling program is selected by the processor to make a call to send the predetermined message to a predetermined destination depending on the instruction.

However, Tognazzini teaches a communication section for making a call, wherein the programs includes a telephone-calling program including a predetermined message, wherein the telephone-calling program is selected by the processor to make a call to send the predetermined message to a predetermined destination depending on the instruction (*figures 4a-c or referring to col. 11, ln. 1 to col. 14, ln. 39*).

Since the modified Oh et al. and Tognazzini are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to further modify Oh et al. by incorporating the teaching of Tognazzini in order to automatically update and notify the user of his schedule.

15. Regarding claim 12, the modified Oh et al. do not disclose a system according to claim 11, further comprising: a GPS receiver for receiving GPS signals to obtain geographical location information, wherein the predetermined message with the geographical location information is sent to the predetermined

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destination. However, Tognazzini further teaches a GPS receiver for receiving GPS signals to obtain geographical location information, wherein the predetermined message with the geographical location information is sent to the predetermined destination (*figures 4a-c or refer to col. 11, ln. 1 to col. 14, ln. 39*).

Since the modified Oh et al. and Tognazzini are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to further modify Oh et al. by incorporating the teaching of Tognazzini in order to determine the time of travel from the user's location to the meeting's location.

16. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dahan et al. (US Patent No. 6018708) in view of Fukuda (US Patent No. 6456721).

17. Regarding claim 13, Dahan et al. disclose a system comprising an input/output device and a main processing device, which are provided separately from each other, wherein the input/output device comprises: a microphone for picking up a sound produced in an oral cavity of a user (*col. 2, ln. 60-67*); and a first communication section for communicating with the main processing device (*telephone 101 in figure 1 and col. 2, ln. 60-67*), and

the main processing device comprises: a second wireless communication section for communicating with the input/output device (*figures 4 or 6 and col. 2, ln. 60-67*); a database for retrievably storing a plurality of registered sounds, each

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of the registered sounds corresponding to a different instruction (*dictionary 403 or referring to col. 8, ln. 45-67*); and a processor controlling such that, when inputting an input sound from the input/output device through the second wireless communication section, the database is searched for an instruction corresponding to the input sound and, when the instruction is found, an operation corresponding to the instruction is performed (*col. 8, ln. 45 to col. 9, ln. 67*).

Dahan et al. fail to disclose that the microphone is a bone conduction microphone mounted on a head of a user. However, Fukuda teaches that the microphone is a bone conduction microphone mounted on a head of a user (*figures 1-6*).

Since Dahan et al. and Fukuda are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Dahan et al. by incorporating the teaching of Fukuda in order to enable users to wear the headset to transmit and receive two-way speech communication.

18. Claims 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dahan et al. (US Patent No. 6018708) in view of Fukuda (US Patent No. 6456721), as applied to claim 13 above, and further in view of Tognazzini (US Patent No. 5790974).

19. Regarding claim 15, Dahan et al. do not disclose a system according to claim 13, wherein the main processing device further comprises: a memory

storing a plurality of programs including a telephone-calling program having a predetermined message therein; and a communication section for making a call using a public network, wherein the telephone-calling program is selected by the processor to make a call to send the predetermined message to a predetermined destination depending on the instruction.

However, Tognazzini teaches a memory storing a plurality of programs including a telephone-calling program having a predetermined message therein; and a communication section for making a call using a public network, wherein the telephone-calling program is selected by the processor to make a call to send the predetermined message to a predetermined destination depending on the instruction (*figures 4a-c or referring to col. 11, ln. 1 to col. 14, ln. 39*).

Since the modified Dahan et al. and Tognazzini are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to further modify Dahan et al. by incorporating the teaching of Tognazzini in order to automatically update and notify the user of his schedule.

20. Regarding claim 17, the modified Dahan et al. do not disclose a system according to claim 15, further comprising: a GPS receiver for receiving GPS signals to obtain geographical location information, wherein the predetermined message with the geographical location information is sent to the predetermined destination. However, Tognazzini further teaches a GPS receiver for receiving GPS signals to obtain geographical location information, wherein the

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predetermined message with the geographical location information is sent to the predetermined destination (*figures 4a-c or refer to col. 11, ln. 1 to col. 14, ln. 39*).

Since the modified Dahan et al. and Tognazzini are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to further modify Dahan et al. by incorporating the teaching of Tognazzini in order to determine the time of travel from the user's location to the meeting's location.

21. Claims 14 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura et al. (US Patent No. 5199080) in view of Fukuda (US Patent No. 6456721).

22. Regarding claim 14, Kimura et al. disclose a system comprising an input/output device and a main processing device, which are provided separately from each other, wherein the input/output device comprises: a microphone for picking up a sound produced in an oral cavity of a user (*Microphone M in figure 5*); a database for retrievably storing a plurality of registered sounds, each of the registered sounds corresponding to a different instruction (*Standard Pattern Storage Unit 5 in figure 5*); and a first processor controlling such that, when inputting an input sound from the microphone, the database is searched for an instruction corresponding to the input sound (*Digital Processor 41 in figure 7*); and a first wireless communication section for sending the instruction to the main processing device (*Infrared LED D1 in figure 5*), and the main processing device

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comprises: a second wireless communication section for receiving the instruction from the input/output device (*Receiver 102 in figure 1*); and a second processor controlling such that, when inputting the instruction from the input/output device through the second wireless communication section, an operation corresponding to the instruction is performed (*Controlled Device 103 in figure 1 should include processor*).

Kimura et al. fail to specifically disclose that the microphone is a bone conduction microphone mounted on a head of a user. However, Fukuda teaches that the microphone is a bone conduction microphone mounted on a head of a user (*figures 1-6*).

Since Kimura et al. and Fukuda are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Kimura et al. by incorporating the teaching of Fukuda in order to enable users to wear the headset to transmit and receive two-way speech communication.

23. Regarding claim 19, Kimura et al. disclose an input/output device comprising: a microphone for picking up a sound produced in an oral cavity of a user (*Microphone M in figure 5*); a database for retrievably storing a plurality of registered sounds, each of the registered sounds corresponding to a different instruction (*Standard Pattern Storage Unit 5 in figure 5*); a processor controlling such that, when inputting an input sound from the microphone, the database is searched for an instruction corresponding to the input sound (*Digital Processor*

41 in figure 7); and an interface to an external information processing device, for sending the instruction to the external information processing device (*Infrared LED D1 in figure 5*).

Kimura et al. fail to specifically disclose that the microphone is a bone conduction microphone mounted on a head of a user. However, XXX teach that the microphone is a bone conduction microphone mounted on a head of a user (*figures 1-6*).

Since Kimura et al. and Fukuda are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Kimura et al. by incorporating the teaching of Fukuda in order to enable users to wear the headset to transmit and receive two-way speech communication.

24. Regarding claim 20, Kimura et al. fail to disclose a input/output device according to claim 19, further comprising: a bone conduction speaker for producing bone conduction vibrations, wherein the bone conduction speaker is mounted on the head of the user, wherein the sound signal received from the external information processing device through the interface is output to the bone conduction speaker which converts it into bone conduction vibrations.

However, Fukuda teaches a bone conduction speaker for producing bone conduction vibrations, wherein the bone conduction speaker is mounted on the head of the user, wherein the sound signal received from the external information processing device through the interface is output to the bone conduction speaker

which converts it into bone conduction vibrations (*figures 1-6 and col. 3, ln. 1-23, the headset is connected to an external radio equipment. The functionality of a speaker, is to receive signal from the radio equipment, is well known in the art*).

Since Kimura et al. and Fukuda are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to further modify Kimura et al. by incorporating the teaching of Fukuda in order to enable users to listen to speech signal played by the external system.

25. Claims 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura et al. (US Patent No. 5199080) in view of Fukuda (US Patent No. 6456721), as applied to claim 14 above, and further in view of Tognazzini (US Patent No. 5790974).

26. Regarding claim 16, the modified Kimura et al. do not disclose a system according to claim 14, wherein the main processing device further comprises: a memory storing a plurality of programs including a telephone-calling program having a predetermined message therein; and a communication section for making a call using a public network, wherein the telephone-calling program is selected by the processor to make a call to send the predetermined message to a predetermined destination depending on the instruction.

However, Tognazzini teaches a memory storing a plurality of programs including a telephone-calling program having a predetermined message therein;

and a communication section for making a call using a public network, wherein the telephone-calling program is selected by the processor to make a call to send the predetermined message to a predetermined destination depending on the instruction (*figures 4a-c or referring to col. 11, ln. 1 to col. 14, ln. 39*).

Since the modified Kimura et al. and Tognazzini are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to further modify Kimura et al. by incorporating the teaching of Tognazzini in order to automatically update and notify the user of his schedule.

27. Regarding claim 18, the modified Kimura et al. do not disclose a system according to claim 16, further comprising: a GPS receiver for receiving GPS signals to obtain geographical location information, wherein the predetermined message with the geographical location information is sent to the predetermined destination. However, Tognazzini further teaches a GPS receiver for receiving GPS signals to obtain geographical location information, wherein the predetermined message with the geographical location information is sent to the predetermined destination (*figures 4a-c or refer to col. 11, ln. 1 to col. 14, ln. 39*).

Since the modified Kimura et al. and Tognazzini are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to further modify Kimura et al. by incorporating the teaching of Tognazzini in order to determine the time of travel from the user's location to the meeting's location.

Conclusion

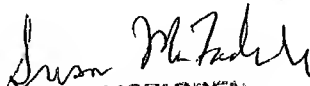
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huyen Vo whose telephone number is 703-305-8665. The examiner can normally be reached on M-F, 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 703-305-4827. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner Huyen X. Vo

August 27, 2004


SUSAN MCFADDEN
PRIMARY EXAMINER